# TACTICAL SPACE

BY CAPT. ANDY R. LEE, USMC
LTC GUY M. BURROW

## LESSONS FOR THE NEW FA40

### Editor's Note

The guidelines in this article are based on lessons learned by the authors, during their operational deployments in support of Operation Iraqi Freedom (OIF) as well as numerous Joint and Combined exercises at the Marine Expeditionary Force through Combined Joint Task Force level.
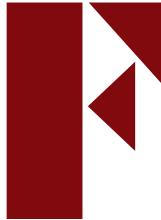
**F**or those in the Functional Area 40 career field, several thoughts may have crossed their minds before they made the choice to leave their basic branch and join the ranks of the relatively few FA40s serving in the Army today. The initial thoughts could have been "I've got to choose a Career Field? … FA40? I didn't know we had Space Officers. Sounds interesting – I'll put it down as my third choice." Another thought may have been, "This is my ticket to becoming an astronaut!"

Once the career field was selected, the apprehensive investigation began into what Army "Space Operations" is really all about. During the first major stop in Space education, the Space Operations Officers Qualification Course (SOOQC), officers likely experienced one or both of two distinct reactions: the first, amazement at the numerous Space-based possibilities and technologies; the second, skepticism in whether or not they could make these capabilities relevant, particularly at the tactical and operational levels of military operations. Rest assured that both of these reactions still resonate with experienced Space officers today.

It may not have been difficult to become a Space Officer, but it takes hard work, dedication, and continued professional development to become a significant and relevant member of the warfighting staff. Although the astronaut idea may not have come to pass, Space Officers are still one of a select few.

This article is intended to give new and perhaps even the experienced Space Operations Officer five rules for success as an FA40 at the tactical and operational staff levels. These rules are not focused on specific technologies or tasks; rather, they focus on the individual through organizational responsibilities

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# FIVE RULES FOR THE NEW TACTICAL FA40

## Rule 1 — Sometimes It Takes a Rocket Scientist

In November 2005, during a Leader's Professional Development session in the Al Faw Palace in Baghdad, Iraq, the MNC-I Commander, LTG John R. Vines, told the officers and senior enlisted in the room, "Today's warriors need to understand technology. Today's leaders need to understand the electromagnetic spectrum." If this is true for the wide audience of the MNC-I staff, it is certainly the case for the Space Operations Officers on the warfighting staff. While the Space Operations Officer Qualification Course provides the new FA40 with the basic academic foundation for applicable Space topics and technologies, this is only the beginning of the education process, focusing primarily on the basic Space Force Enhancement areas outlined in JP 3-14. The FA40 should always be prepared to perform the standard tasks associated with Space Force Enhancement. An example would be completing or obtaining a GPS navigation accuracy report. On today's battlefield this type of information is required knowledge and valuable when needed, but is rarely asked of the FA40. Knowing these basic Space Force Enhancement tasks will create a successful and functional Space Operations Officer. In order to be effective, an FA40 should strive to know the details and science behind the tools they will ply. For the navigation accuracy example, do they really understand what degrades GPC accuracy, and more importantly how it can be improved? This is what the commander's really want to know. These FA40s are the Space expert on the staff – they know the science behind the current and emerging technologies.

One of the charters of the FA40 is to investigate, advocate and integrate new and emerging technologies, whether they are purely Space-based or simply Space-enabled. This is an area where the FA40 can have a true, meaningful impact. The Space Officer needs to know how to find and understand the capabilities of new Space-related assets in order to integrate them into com-bat operations, further facilitating the commander's intent. For starters, they need to use the many Space-related organizations and personnel first introduced to them during Space Operations Officer Qualification Course. As FA40s continue their research into new capabilities, they will make new contacts. They must use this ever expending network to find new products and capabilities, and also to filter problem sets in search of new solutions. They will soon build a database of knowledge on current, new and emerging capabilities, and be well on their way to being the "rocket scientist" their leadership expects them to be.

## Rule 2 — Innovate and Educate

Understanding how Space-related capabilities work will go a long way to helping FA40s understand how to employ them in support of conventional maneuver operations in new and innovative ways. Space and some of the associated technologies by themselves are not silver bullets – they will not "win the war" on their own. However, when combined with other conventional assets and operations, non-traditional technologies can have a significant impact on the success of the mission. Often, these capabilities can be used in ways that they were never intended. For example, the Counter-Improvised Explosive Device effort in Iraq currently leverages multiple Space-enabled capabilities, some designed years ago for a completely different strategic fight.

Coming from the various combat arms and support branches prior to selection as Space Operations Officers, FA40s are uniquely poised to combine their previous conventional branch experiences with their knowledge of special technologies to develop supporting strategies for the ground commander requirements. Too often, the "forty-pound" brains design new capabilities that have potentially beneficial capabilities, yet they lack the ability to integrate their tool into a practical military application. Space Operations Officers are the best qualified on the staff to accomplish this critical goal.

After many years of experience in Europe and Asia as well as more than eight years of combat operations in numerous theaters since September 2001, most staff sections understand the basic Space Force Enhancement contributions to their specific areas of responsibility. For example, the Intelligence personnel are usually well versed on Spaced-based Intelligence, Surveillance and Reconnaissance (ISR), one of the traditional Space Force Enhancement missions. However, the FA40 should always be prepared to inform and educate applicable staff sections on new possibilities and techniques. On rare occasions,
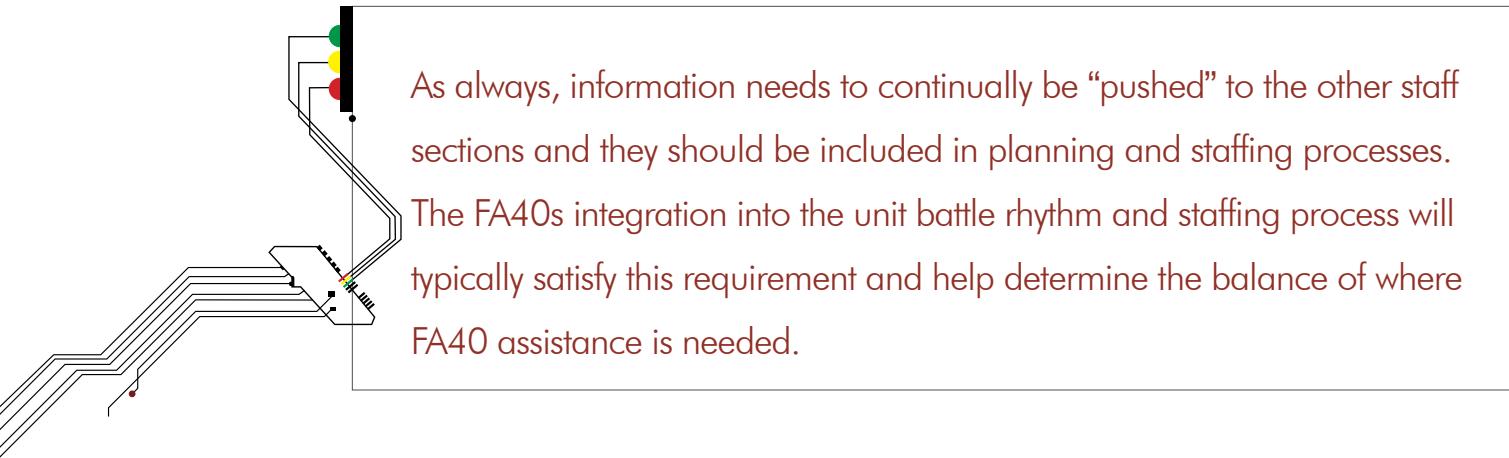
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their expertise may be required to assist the various staff sections on existing products, services and procedures already at their disposal. Tailored Space education briefs are excellent seeds for future products and requests. The amount of support and education rendered depends largely on the inclusive Space knowledge of the unit being supported.

## Rule 3 — Be a Good Staff Officer

Coming up with new and innovative applications for Space-related technologies is not the end of duties as a Space Officer. The most important step is translating innovate ideas and/or concepts into action, ensuring the right information, capabilities and effects get to the right people. Like everyone else on the staff, FA40s are only as effective as their ability to adhere to the time-tested staffing process and procedures. A good Space Operations Officer knows the commanders intent, current intelligence, and the planning cycle, and is well integrated into the battle rhythm. It is good to remember that Space is not done for Space's sake; it is driven by the commander's intent. In order to ensure that concepts and capabilities are put into action FA40s must be well-versed in standard military staffing and orders production. This includes knowing the Military Decision-Making Process; Decide, Deliver, Detect, Assess targeting methodology, Fragmentary Orders, Contingency Operations, Executive Orders, Battle Drills, and the like. Nobody else is going to deliver these — if they are not done correctly Space products or ideas will never survive the grueling staffing process. FA40s must be able to translate innovative ideas into the standard military language that drives operations.

## Rule 4 — Know Who You Work for and With

For Space Operations Officer, the major emphasis is on the Operations portion of the title. The Space Officer is in a unique position, involved with capabilities that cross numerous staff sections and areas of responsibility. While Space crosses many functional areas across the staff, the main driver for operations is the G3, C/J3, or S3 or the Commanders themselves. Accordingly, most Space Operations Officers at the Corps and Division levels find themselves working directly for or respon-

sible to the Operations Officer. In this construct, it is imperative to educate and demonstrate to the Operations Officer how Space-related capabilities can contribute to accomplishing the commander's intent. Similarly, it must be ensured that subordinate commands understand what FA40s can offer as well. As a result, the appropriate "pull" for Space-related products and support from the Operations section, if not subordinate line units themselves, will be generated.

This is not to suggest that other staff sections get bypassed on the way to engage the Operations Officer, especially when the Space-related capability falls in a specific staff section's area of responsibility. As always, information needs to continually be "pushed" to the other staff sections and they should be included in planning and staffing processes. The FA40s integration into the unit battle rhythm and staffing process will typically satisfy this requirement and help determine the balance of where FA40 assistance is needed. Often information to help with the decision making process is needed from other sections. This may be the S2, the Targeting Officer, the Information Operations Officer, or even a separate governmental agency. It is difficult, if not impossible, to remain relevant by sitting in a section or secure facility – FA40s must be willing and able to get out and integrate with the key staff and support agencies in order to develop the key relationships that will make their capabilities most relevant. Similarly, Space is Joint. When deployed, the FA40 will work with a wide variety of Space professional. Other services own or participate in Space-related operations, services and capabilities. FA40s should develop allies and mutually supporting relationships with all of the key Space players in their area of operations. Ultimately, all should be working toward the same goal — pushing Space to respective staffs.

## Rule 5 — Be Confident and Aggressive

Having a solid technical background should provide the required confidence in developing new concepts and educating others on Space derived benefits or procedures. As a member of the operations staff it is the FA40s responsibility to ensure the solutions they bring as well as their concerns are vetted with the G/J/S3. While they may face skepticism on occasion, they must be passionate, confidant, and, ultimately, aggressive in ensuring
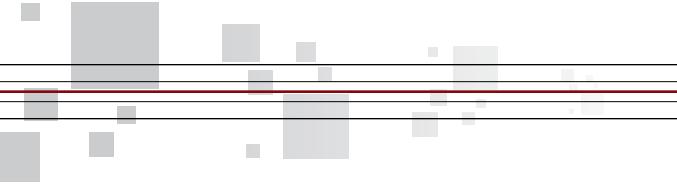
information is delivered to the appropriate decision makers. Being grounded with a firm technical foundation, with properly developed plans and products allows for aggressive engagement with these key personnel.

The need for integration across the staff has been discussed. This often necessitates FA40s to attend other staff sections' planning or intelligence meetings. FA40s should seek out these opportunities and ensure an invitation to these events – sometimes just by showing up, but they must come prepared to provide worthwhile input and develop their reputations every time they speak or when someone views Space products or presentations.

When possible, FA40s should seek opportunities to deploy – they will learn more during a month of deployment than an entire year in garrison. Deploying gives credibility and invaluable on-the-job-training with both current and emerging technologies. Of course, FA40s should always capitalize on their experience by developing and sharing after action assessments, lessons learned, and professional journal publications. The smart FA40 learns from others; ensure experiences are not forgotten and available for future generations of Space cadre.

## Conclusion

Development into a relevant part of the staff as a Space Operations Officer requires significant work and dedication. It starts with a strong desire and dedication to learn and understand the science behind Space-related assets. By combining this newfound knowledge with background branch experience, FA40s will be able to educate others and develop new ideas for integrating these technologies into plans supporting the commander's objectives. Proficiency and integration into the military processes of the staff will ensure that these plans become a reality. Understanding who to work for and with will develop the necessary relationships to successfully integrate contributions. In total, these efforts will give FA40s the confidence in their abilities, allowing them to aggressively support their command, making the Space Operations Officer a key member of the warfighting team. The above five rules are the result of extensive and diverse experiences gained during operational deployments and should serve FA40s well as they continue on their journey as Space Warriors.

# BIOS

## CAPT. ANDY R. LEE, USMC

Capt. Andy R. Lee is a Marine Corps Space Staff Officer currently assigned to 1st Space Brigade. His 10 years military experience includes over 700 flight hours before transferring to USMC communication and the Space MOS. Capt. Lee's operations include three combat tours including two Space Staff Officer Billets, NATO & Ulchi Focus Lens (UFL) Space Team exercises, and serving on the only Joint Space Team in theater as the II Marine Expeditionary Force Space Staff Officer. Capt. Lee received his B.S. in Aeronautical Studies with a minor in Space Studies from the University of North Dakota, and has recently completed his M.S. in Space Studies from American Military University.

## LTC GUY M. BURROW

LTC Guy M. Burrow became an FA40 in 2003 after 10 years of service as an Army fixed-wing Aviator. He is currently the Chief, G3 Technical Operations and senior Space Operations Officer at the XVIII Airborne Corps. His combat operational experience includes two tours in Iraq serving as the Deputy, Multi-National Corps-Iraq C3 Space and Special Technical Operations during OIF 04-06, and later as the Chief, MNC-I C3 Technical Operations for Operation Iraqi Freedom 07-09. LTC Burrow received his M.S. in Electrical Engineering in 1992 at the United States Military Academy and later his M.S. in Electrical and Computer Engineering from the Georgia Institute of Technology in 2002.